

IN THE CLAIMS:

a. Please cancel claims 20-22 and 27-51 without prejudice. ✓

b. Please amend claims 23, 24 and 25 as follows: ✓

(even if amended)  
new claims  
should all be  
underscored

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P1  
23. (Amended) [The] A calcination plant [of claim 22, wherein  
said] for a particulate feed material comprising:

C1  
a substantially vertical calcination reactor [is  
substantially vertical and has] having a bottom portion [,];

means for effecting transport of the particulate feed  
material through said calcination reactor along a substantially  
cyclonic flow path; and

means for creating a heat source within said cyclonic  
flow path, said effecting means comprising means for introducing  
the particulate material into said calcination reactor  
substantially tangentially of said bottom portion, and said  
cyclonic flow path extending upwards from said bottom portion, said  
creating means being mounted in said bottom portion.

24. (Amended) The plant of claim [22] 23, wherein said creating  
means comprises a burner.

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25. (Amended) The plant of claim [20] 23, further comprising a storage silo for the particulate feed material, means for fluidizing the particulate feed material prior to storage and for conveying a resulting fluidized feed stream to said storage silo, a first heat exchanger, a second heat exchanger and a solid-gas separation unit, said effecting means constituting part of means for fluidizing the particulate feed material from said storage silo and for sequentially conveying a resulting fluidized feed stream through said calcination reactor and said solid-gas separation unit to produce a solid calcined product and a gaseous exhaust, said first heat exchanger being located between said gaseous exhaust and a reactor air stream used for fluidizing the particulate feed material conveyed to said calcination reactor, and said second heat exchanger being located between said gaseous exhaust and a feed air stream used for fluidizing the particulate feed material conveyed to said storage silo, said solid-gas separation unit, said first heat exchanger and said second heat exchanger being located in said storage silo and at least partially immersed in the particulate feed material therein.